APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/503,676	02/14/2000	Michael Joseph Johnson	RAL9-99-0124	7028

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EXAMINER
WON, MICHAEL YOUNG

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/503,676	JOHNSON, MICHAEL JOSEPH
	Examiner	Art Unit	
	Michael Y. Won	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 December 2004_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-27 and 29-47_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-27 and 29-47_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-2, 6, 10-11, 15, 19-20, 24, 29, and 38-39 have been amended.

2.   Claims 1-27 and 29-47 have been re-examined and are pending with this action.

Response to Amendment

3.   Applicant's amendments and arguments with respect to claim 1-27 and 29-47

filed December 20, 2004 have been fully considered but they are deemed to be moot in

view of the new ground(s) of rejection based on the teachings of the same prior art,

Wilson et al. (US 6,651,117 B1). See rejection and response to arguments below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1, 2, 4-6, 9-11, 13-15, 18-20, 22-24, 27, 29-34, 36, 38-44, and 46 are

rejected under 35 U.S.C. 102(e) as being anticipated by Wilson et al. (US 6,651,117

B1).

INDEPENDENT:

As per claims 1, 2, *6*, 10, 11, *15*, 19, 20, and *24*, Wilson teaches of a network

having a sending computer system and *a receiving computer system*, each of the

sending and *receiving* computer systems including a processor, a memory (see col.7,

lines 24) and a network adapter (see col.6, line 10: NIC), the memory containing a data

structure used for storing a common data buffer (see col.6, lines 44-48), a method,

system, and a computer readable medium containing a computer program, for sending

and receiving payload data by layers or sub-layers (see Fig.1) of at least one

communications protocol (see abstract), the method comprising the steps of: (a) storing

a first start pointer pointing to a first byte of the payload data in a first common data

buffer of the sending computer system (see col.6, lines 62-67); (b) adding a first header

(see col.3, line 59-60) to the payload data in the first common data buffer at a location

preceding the byte pointed to by the first start pointer according to a first protocol layer

of the communications protocol at the sending computer system (see col.6, line 67 to

col.7, line 4); (c) adjusting the first start pointer to point to a first byte of the first header

(see col.6, lines 5-8); (d) invoking a send procedure of a second and lower protocol

layer of the communications protocol at the sending computer system (see col.6, lines

62-64 and col.8, lines 34-35); (e) transferring to the second protocol layer the start

pointer by the send procedure, wherein the payload data is not copied in preparation for

or during the send procedure (see col.2, lines 59-61; col.3, lines 51-58; and col.6, lines

1-8); (f) adding a second header to the payload data in the first common data buffer at a

location preceding the first start pointer (see col.6, line 67 to col.7, line 4) {NOTE:

Wilson teaches essentially that prior art network layer communication is allowed (see

col.3, lines 51-52), thus the number of protocol layers does not functionally distinguish

the invention and furthermore, after each succession of layers the pointers are clearly

adjusted (see col.6, lines 5-8)}, wherein the second header is contiguous with the first

header (see Fig.3 and col.6, lines 31-33 & 36-38); (g) sending the payload data and the

first and second headers to the receiving computer system (see col.8, lines 34-35); (h)

storing the payload data and the first and second headers in a second common data

buffer of the receiving computer system (see col.9, lines 10-12), wherein the second

header is contiguous with the first header (see Fig.3 and col.6, lines 31-33 & 36-38); (i)

invoking a receive procedure of a second protocol layer of the communications protocol

at the receiving computer system (see col.9, lines 19-24); (j) storing a pointer and end

pointer to the payload data and also storing a second start pointer pointing to a first byte

of the second header in the second common data buffer (see col.9, lines 45-48); (k)

adjusting a the second start pointer to point to the first byte of the first header according

to the second protocol layer at the receiving computer system (see col.6, lines 5-8); (l)

invoking a receive procedure of a first and higher protocol layer of the communications

protocol at the receiving computer system (see note above and col.9, lines 19-24); and

(m) transferring to the first protocol layer at the receiving computer system the second

start pointer (see note above), wherein the payload data is not copied in preparation for

or during the receive procedure (see col.2, lines 59-61; col.3, lines 51-58; and col.6, lines 1-8).

As per claims 29, 38, and 39, Wilson teaches a method, a system, and a computer readable medium containing a computer program for processing payload data in a computer system using layers of a network communications protocol (see abstract), the method, system and program comprising the steps of: (a) storing the payload data, a first header, and a second header in a data buffer (see col.6, lines 3-5), wherein the second header is contiguous with the first header (see Fig.3 and col.6, lines 31-33 & 36-38); (b) processing the payload data using a first protocol layer of the network communications protocol (see col.2, lines 39-48); and (c) processing the payload data using a second protocol layer of the network communications protocol (see note above and col.2, lines 39-48), wherein the payload data is not copied during and between being processed by the first and second protocol layers (see col.2, lines 59-61; col.3, lines 51-58; and col.6, lines 1-8).

DEPENDENT:

As per claims 4, 13, and 22, Wilson further teaches wherein the transferring step includes any application data or information required by the send procedure of the second and lower protocol layer (see col.6, lines 41-55).

As per claims 5, 14, and 23, Wilson teaches of further comprising the step of (f) adjusting a size of the payload data to be sent by the second and lower protocol layer by adjusting the end pointer (see col.6, lines 5-8).

As per claims 9, 18, and 27, Wilson teaches of further comprising the step of (m) transferring any application data or information required by the receive procedure of the first and higher protocol layer {NOTE: Wilson teaches essentially that prior art network layer communication is allowed (see col.3, lines 51-52), thus the number of protocol layers does not functionally distinguish the invention and furthermore, after each succession of layers the pointers are clearly adjusted (see col.6, lines 5-8)}.

As per claims 30 and 40, Wilson further teaches wherein the payload data does not move within the data buffer during and between being processed by the first and second protocol layers (see col.2, lines 59-61; col.3, lines 51-58; and col.6, lines 1-8).

As per claims 31 and 41, Wilson further teaches wherein the processing step (a) further comprises the steps of (a2) positioning a first pointer to point to a first byte of the payload data; and (a3) positioning a second pointer to point to a last byte of the payload data, wherein the first protocol layer uses the first and second pointers to locate the payload data for processing (see col.6, lines 40-55).

As per claims 32 and 42, Wilson further teaches wherein the processing step (b) further comprises the steps of: (b2) adding a first element to the payload data; and (b3) moving the second pointer to point to a last byte of the first element, wherein the first pointer does not move when the first element is added (see col.6, lines 40-55).

As per claims 33 and 43, Wilson further teaches wherein the processing step (c) further comprises the steps of (c2) adding a second element to the payload data; and (c3) moving the second pointer to point to a last byte of the second element, wherein the second protocol layer uses the first and second pointers to locate the payload data

and the first element to add the second element, wherein the first pointer does not move

when the second element is added (see col.6, lines 40-55).

As per claims 34 and 44, Wilson further teaches wherein the first element

comprises a header associated with the first protocol layer (see col.3, lines 59-65).

As per claims 36 and 46, Wilson further teaches wherein the second element

comprises a header associated with the second protocol layer (see col.3, lines 59-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 3, 7, 8, 12, 16, 17, 21, 25, 26, 35, 37, 45, and 47 are rejected under 35

U.S.C. 103(a) as being unpatentable over Wilson et al. (US 6,651,117 B1) in view of

Boucher et al. (US 6226680 B1).

As per claims 3, 12, and 21, Wilson does not explicitly teach wherein a checksum

is added to the header in the common data buffer preceding the payload data being

sent. Boucher teaches wherein a checksum is added to the header in the common data

buffer preceding the payload data being sent (see col.8, line 67 to col.9, line 3). It would

have been obvious to a person of ordinary skill in the art at the time the invention was

made to employ the teachings of Boucher within the system of Wilson by implementing

adding checksum to the header in the common data buffer preceding the payload data being sent within the method, system, and program of sending and receiving payload data because this will notify to the receiving device that the data is correct and not corrupt. Wilson teaches of this error checking functionality in the transport layer of the conventional method (see col.2, lines 1-3).

As per claims 7, 16, and 25, Wilson does not explicitly teach wherein a checksum following the header and added by the sending computer system is removed from the received payload data in the common data buffer. Boucher teaches wherein a checksum following the header and added by the sending computer system is removed from the received payload data in the common data buffer (see col.7, lines 21-24). See motivation for claims 3, 12, and 21 rejection above.

As per claims 8, 17, and 26, Wilson does not explicitly teach wherein the checksum is removed by adjusting the start pointer of the common data buffer to point to a memory location following the checksum. Boucher teaches wherein the checksum is removed by adjusting the start pointer of the common data buffer to point to a memory location following the checksum (see col.7, lines 21-27). See motivation for claims 3, 12, and 21 rejection above.

As per claims 35 and 45, Wilson does not explicitly teach wherein the first element comprises a checksum associated with the first protocol layer. Boucher teaches wherein the first element comprises a checksum associated with the first protocol layer (see col.6, lines 33-37 and col.8, line 67 to col.9, line 3). See motivation for claims 3, 12, and 21 rejection above

As per claims 37 and 47, Wilson does not explicitly teach wherein the second element comprises a checksum associated with the second protocol layer. Boucher teaches wherein the second element comprises a checksum associated with the second protocol layer (see col.6, lines 33-37 and col.8, line 67 to col.9, line 3). See motivation for claims 3, 12, and 21 rejection above

Response to Arguments

6.   Applicant's arguments filed December 20, 2004 have been fully considered but they are not persuasive. *Wilson* clearly teaches the element of the amended claims.

With respect to the argument presented by the applicant(s), the cited Figure 4 of the *Wilson* patent is describing a specific situation wherein the data packet to be transmitted is too large to transmit as a single packet and must be broken up into smaller "chucks" (see col.7, lines 38-50). Such technique is well known in the art wherein a header precedes the payload portions for successfully re-joining the chunks at the receiving device. The functionality taught by *Wilson* does not specifically apply to the recited broad limitation of the claimed invention because the claimed invention does not recite wherein the data is transmitted in partitioned chunks.

Wilson teaches in column 6, lines 31-33 & 36-38 with reference to Fig.3, that the SID header portion includes a common SID header **and a layer specific SID header,** which clearly teaches of a "second header contiguous with a first header".

Furthermore, *Wilson* teaches of overcoming conventional prior art technique of buffer copying as data is processed from one layer to the next (see col.2, lines 25-56). Such prior art technique is well known wherein the header of each layer is appended next to the previous header (contiguous). *Wilson* teaches of an interface that is "essentially standardized, thus allowing **similar routines** to use the interface" (see col.2, lines 62-63). The main distinction of *Wilson* patent over prior art is replacing buffer descriptors including memory address pointers (see col.3, lines 11-12) in place of payload data to "greatly reducing the amount of copying performed during inter-layer communication" (see col.3, lines 2-5).

Conclusion

7.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Y. Won whose telephone number is 571-272-3993. The examiner can normally be reached on M-Th: 7AM-5PM.

        The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

        Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Won

BHARAT BAROT
PRIMARY EXAMINER

June 8, 2005